



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/580,710

05/25/2006

Jean-Michel Claude Gaston Savignat

TS6449US

8869

23632 7590 08/04/2008
SHELL OIL COMPANY
P O BOX 2463
HOUSTON, TX 772522463

EXAMINER

BOMAR, THOMAS S

ART UNIT

PAPER NUMBER

3676

MAIL DATE

DELIVERY MODE

08/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,710	Applicant(s) SAVIGNAT ET AL.	
	Examiner Shane Bomar	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the control means and releasable locking means must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. **Note:** this is a repeat of a previous objection that was not addressed.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3676

3. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 9, the Applicant has added limitations wherein the protection member is sufficiently wear resistant to effectively clean the casing of cement. The term "cement" actually has no antecedent basis in the claims as only a "body of selected material" is claimed as being removed. Are there now two materials to be removed? This issue then becomes more confusing once one reaches claims 7 and 19. All claims that depend from either one of these claims is also now considered to be indefinite.

Claim Objections

4. Claims 7 and 19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Based on what is noted above, it appears that the subject matter in these claims may now be redundant based on the amendments to the independent claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3676

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 7-13, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,141,063 to Quesenbury.

Regarding claims 1 and 9 (as can be best understood by the Examiner), Quesenbury discloses a method of removing a body of selected material from the interior of a casing 11 extending into a borehole formed in an earth formation (Fig. 6), the method comprising: a) lowering a drill bit 2 for further drilling of the borehole, into the casing, the drill bit having a longitudinal axis of rotation during operation, the drill bit comprising rock cutting means 5, at least one protection member 6 for protecting the inner surface of the casing from contact with the rock cutting means, each protection member being adapted to remove said selected material from the interior of the casing and being radially movable towards the inner surface of the casing, and control means 17 for applying a radially outward force of controlled magnitude to the protection member; b) rotating the drill bit in the casing; and c) operating the control means so as to apply said radially outward force of controlled magnitude to the protection member (Figs. 3 and 4; col. 4, lines 26-53). The protection member 6 is clearly made of a material of lower hardness than the rock cutting means 5, which are made of tungsten carbide.

Regarding claims 2, 3, and 10, the drill bit comprises a reamer arm 3 movable in radial direction relative to said axis of rotation, wherein the rock cutting means 5 and each protection member 6 are provided at the reamer arm, and wherein step c) comprises operating the control means so as to move the reamer arm in radially outward direction relative to the axis of rotation by controlling the rate of fluid pumped to the control means (col. 5, lines 31-67).

Regarding claim 4, the drill bit is axially moved through the casing simultaneously with steps b) and c) (col. 3, lines 5-15).

Regarding claims 7, 8, and 19, the body of selected material includes a body of cement located in a lower end portion of the casing, and the body of selected material extends into a lower end portion of the casing, said lower end portion having a larger inner diameter than a remainder portion of the casing that contains the restriction 1 (Fig. 6).

Regarding claims 11 and 12, releasable locking means 10 is released by the action of the control means (col. 5, lines 23-30).

Regarding claim 13, the protection member 6 is formed as an integral part of the reamer arm 3 (Figs. 1-4; col. 4, lines 53-60).

Regarding claims 16 and 17, the protection member 6 is rounded when viewed from the top to match the circumference of the casing and/or the borehole being drilled (Fig. 5), and the member 6 is a scraper (col. 4, lines 45-50).

Regarding claim 18, the protection member is adapted to substantially vanish due to wear during drilling into the earth formation with the drill bit, as is notoriously known in the art for drilling elements to do over time (see also col. 7, lines 31-42).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3676

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 4-7, 9, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2,857,141 to Carpenter in view of US 6,397,958 to Charles et al.

Regarding claims 1 and 9 (as can be best understood by the Examiner), Carpenter teaches a method of removing a body of selected material from the interior of a casing 12 extending into a borehole formed in an earth formation (Fig. 2), the method comprising: a) lowering a drill bit for further drilling of the borehole, into the casing, the drill bit having a longitudinal axis of rotation during operation, the drill bit comprising rock cutting means attached to element 20, at least one protection member 28 for protecting the inner surface of the casing from contact with the rock cutting means, each protection member being adapted to remove said selected material from the interior of the casing and being radially movable towards the inner surface of the casing, and control means 34 for applying a radially outward force of controlled magnitude to the protection member; b) rotating the drill bit in the casing; and c) operating the control means so as to apply said radially outward force of controlled magnitude to the protection member (Figs. 1-4; col. 2). However, it is not specifically taught that protection member is made of a material of

Art Unit: 3676

lower hardness than the rock cutting means as the rock cutting means has not been defined or pictured.

Charles et al teach a drill bit for use downhole similar to that of Carpenter as there are protection means 132 and rock cutting means 406 (Fig. 7B). It is further taught that the rock cutting means are PDC cutting elements (col. 12, lines 36-37). Thus, at the time of the invention, it would have been obvious to one of ordinary skill in the art to try the rock cutting means of Charles et al as the rock cutting means for Carpenter, thereby making the metallic protection means of Carpenter less hard than the PDC material of the rock cutting means (KSR, Rationale E).

Regarding claims 4-7, 17, and 19, the bit is moved axially, either upwardly or downwardly, to remove the annular portion of the cement left on the walls of the casing after the cement was initially drilled through (col. 3, lines 20-59 of Carpenter).

Allowable Subject Matter

10. Claims 14 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments filed April 28, 2008 have been fully considered but they are not persuasive. The Applicant argues that Quesenbury does not disclose the newly added limitation that the protection member is sufficiently wear resistant to effectively clean the casing of cement

Art Unit: 3676

but of lower hardness than said rock cutting means. It is first noted that this limitation caused the claims to become indefinite (see above) as it has introduced confusion as to what material, or materials, are actually being removed. The Applicant bases the arguments on the fact that the buttons 5 and 7 are made of the same material. While this may be true, the Examiner relied upon the member 6 itself as the protection member, which is clearly of a different material of lower hardness than either of the buttons 5 or 7.

The arguments with respect to Carpenter are effectively moot in view of the new grounds of rejection above.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 3676

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is (571)272-7026. The examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer H. Gay can be reached on 571-272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shane Bomar/
Examiner, Art Unit 3676